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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,662	09/30/2003	Jerry Barnes	22248-094421	5811

7590 05/28/2004

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EXAMINER

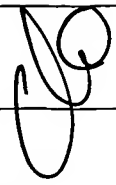
TRIEU, THAI BA

ART UNIT PAPER NUMBER

3748

DATE MAILED: 05/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/675,662	<b>Applicant(s)</b> BARNES ET AL.	
	<b>Examiner</b> Thai-Ba Trieu	<b>Art Unit</b> 3748	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 14 is/are rejected.
- 7) ☒ Claim(s) 9-13 and 15-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

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### **DETAILED ACTION**

For the purpose of this Office Action, the claims 1-20 will be examined as best understood by the examiner.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

***Claims 1-2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prior (Patent Number 6,029,637).***

Prior discloses a supercharging assembly for increasing an amount of air received through an inlet port (Not shown) of an internal combustion engine (10) of a motor vehicle, said supercharging assembly comprising:

a lower intake manifold (Not Numbered) fixedly secured to the internal combustion engine (See Figure 1);

a blower (28) operatively connected to said lower intake manifold for forcing air into said lower intake manifold (Not Numbered) with increased pressure to create charged air (See Figures 1-2);

an inlet duct (38) operatively connected between the inlet port (Not shown) and said blower (28) for directing the air into said blower (See Figure 2);

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an output plate (32) fixedly secured to said lower intake manifold for mounting said blower (28) to said lower intake manifold, said output plate including a recess (34) /a frame surrounding a recess (34) extending down into said lower intake manifold such that said blower is mounted to said recess (See Figure 2); and

a cooling system (30) for cooling said charged air stored in said lower intake manifold.

However, Prior fails to disclose a hood and a clearance for the hood to move to a closed position over the internal combustion engine.

It is the examiner' s position that a vehicle hood and a clearance for the hood to move to a closed position over the internal combustion engine in the above claimed positions would have been obvious to one having ordinary skill in the art. More specifically, one having ordinary skill in the art would have had a vehicle hood and positioned the supercharged engine in the vehicle compartment in such a manner to provide a clearance for the hood to move to a closed position over the internal combustion engine. The use thereof would have protected the turbocharged internal combustion engine from the damage.

Note that an inlet port, wherein the amount of air is delivered or charged to the engine, is a well-known component in internal combustion engine.

***Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prior (Patent Number 6,029,637), in view of design choice.***

Prior discloses the invention as recited above, and further disclose said cooling system including an inner heat exchanger within the intake manifold (See Figure 4), a shaft housing extending outwardly therefrom to a shaft distal end (See Figure 2); a blower pulley fixedly secured to said shaft distal end (See Figure 2); a blower belt (70) extending between said blower pulley and the internal combustion engine to allow the internal combustion engine to drive said blower (28) (See Figure 2).

However, Prior does not address the location of the inner heat exchanger being below the output plate.

It is the examiner's position that the positioning of the inner heat exchanger disposed within said lower intake manifold below said output plate to collect thermal energy stored in said charged air in the above claimed positions would have been obvious to one having ordinary skill in the art. More specifically, one having ordinary skill in the art would have positioned the inner heat exchanger within the intake manifold below or above the output plate. Accordingly, the use of the inner heat exchanger within the intake manifold below the output plate is deemed to be a design consideration which fails to patentability distinguish over the prior art of Prior.

***Claims 7-8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prior (Patent Number 6,029,637), in view of design choice, and further in view of Perry, Jr. (Patent Number 5,460,145).***

The modified Prior device discloses the invention as recited above, and further discloses a spacer defining an air flow path between said inlet duct (38) and the inlet port (Not shown); however, fails to disclose a variable tensioning mechanism.

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Perry, Jr. teaches that it is conventional in the supercharger drive assembly art, to utilize a variable tensioning mechanism (21) to adjust tension in said blower belt (20).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a variable tensioning mechanism to adjust tension in said blower belt, as taught by Perry, Jr., to adjust the tension of the blower belt in the modified Prior device.

### ***Allowable Subject Matter***

Claims **9-13 and 15-20** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Arakawa (US Patent Number 5,448,982) discloses an intake system for an internal combustion engine with a supercharger.
- Wiik (US Patent Number 6,619,275 B2) discloses an internal combustion engine.
- Uchida (US Patent Number 5,911,211) discloses a supercharged engine.
- Ueda et al. (US Patent Number 5,058,558) disclose an air feeding system for a vehicle engine equipped with a supercharger.

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- Abthoff et al. (US Patent Number 6,079,394) disclose a mechanical supercharger for an internal combustion engine and a method making the same.
- Kageyama et al. (US Patent Number) disclose a supercharged engine.
- Englund et al. (US Patent Number 6,604,514 B1) disclose means for a combustion engine having a supercharger.
- Boutcher (US Patent Number 6,012,436) discloses bolt-on supercharger system and method.
- Oda et al. (Patent Number JP 02227515 A) disclose an intake and discharge device of a turbocharged internal combustion engine.
- Yajima (Patent Number JP 63309720 A) discloses an air inlet device for engine with pressure wave supercharger.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (703) 308-6450. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (703) 308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB  
May 26, 2004



Thai-Ba Trieu  
Patent Examiner  
Art Unit 3748